First line of Title
Second line of title

Author's Name
Advisor: Advisor's Name

Date

Contents

Chapter 1

Introduction

This is the place for the introductory and background material. This particular document is a template for typing the Senior Comprehensive. For more information on using LaTeX see the templates and examples on the Math Department website.

You will want to replace all this text with your own material. Notice that there is a line skipped in the input file to produce the new paragraph in the output.

The document is designed to provide a title page, table of contents and bibliography and the required appendices - but you have to enter the text (and titles) in the chapters and and appendices and use the appropriate format for bibliographic references. Any time you change the document you will have to build (typeset) the document twice to get the table of contents, numbering, and bibliography to come out right.

Chapter 2

Title for next chapter

Here is the material of the next chapter, where the mathematical background material is likely to be presented. The program will take care of numbering theorems, definitions, examples, etc. — but you will want `\label{}` commands to allow the numbers to appear in the appendices.

Definition 2.1. Here is the first definition in this chapter.

Of course, once a term is defined, we may want an example:

Example 2.2: *And here we have an example.*

Of course, there will need to be a lot of mathematics here, so presumably we'll want some results:

Theorem 2.3. *If there is an even prime number, it is the number 2.*

Proof. It is well known that every even is divisible by 2. Since a prime number is a number with no proper divisors other than one, no even number can be prime, unless it is the number 2.

Notice that we have a second (useless) paragraph in this proof and a symbol at the right margin marking the end of the proof. □

The text begins again after the proof. [Notice the extra space before and after the theorem and proof.]

Chapter 3

Title for this chapter

Here are a theorem and a definition in this chapter – you will want to copy them to the appropriate appendices (and use the `\label{ }` and `\ref{ }` commands to have LaTeX keep track of the numbers.

Theorem 3.1. *There is an even prime number.*

Definition 3.2. A definition from chapter 3.

Here is a big famous theorem, quoted from another source and not included in the numbering system; we'll pretend it's quoted from Gillman's book [[3]] by using the `\cite{}` command and referring to the `\bibitem` reference defined for that book in the bibliography:

Big Famous Theorem [3] . *There is no such thing as a free lunch.*

Appendix A

Definitions

This appendix will list the definitions presented in the paper. In order to get the numbering right, use the Def* environment (instead of Def) and the `\ref{ }` command to get the number (see the examples). Use copy and paste to get the actual text of the definition.

Definition (2.1). Here is the first definition in this chapter.

Definition (3.2). A definition from chapter 3.

Appendix B

Theorems

Here we get a list of the main theorems — use the Thm* environment with `\label{ }` and `\ref{ }` commands to get LaTeX to handle the numbering. Use copy and past to get the text of the theorem. For named theorems that aren't numbered use the Nmthm environment, as in the text.

Theorem (2.3). *If there is an even prime number, it is the number 2.*

Theorem (3.1). *There is an even prime number.*

Big Famous Theorem. *There is no such thing as a free lunch.*

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